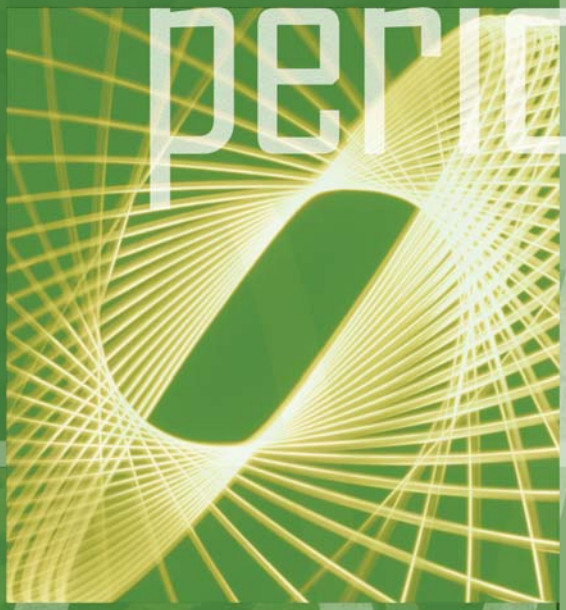
periodic function

g(x) = sin(x)



Sine and Cosine

Periodic Function

In terms of math, a periodic function is one that repeats values cyclically on a period specific to the function. When dealing with integers, a graph of a periodic function will repeat at consistent intervals.

Some common functions that are periodic are the trigonometric functions of sine and cosine. These functions have a period of 2π. While these functions are periodic, there are also arbitrary periodic functions which are the sum of trigonometric functions with the same periods.

A period can also be thought of as a sequence. For example, the decimal expansion of a rational number is a periodic sequence that occurs naturally. Periodic functions can also be used as a way to describe an object, as the function's periodicity is relative to the translational symmetry of the object.

Math: What are the period and amplitude, respectively, of the following sine function: $y = 6 + 3 \sin 2x$?

Answer: PERIOD = π; AMPLITUDE = 3

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
September 2007 S M T W Th F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1	2	3	4	5	6 SAT Test Date
7	8 Columbus Day Sir Isaac Newton's Birthday	9	10	11	12	13
14	15	16	17	18	19 The Birth of the Bab (Baha'i Holiday)	20
21	22	23 Mole Day	24	25	26	27 ACT Test Date
28	29	30	31 Halloween			November 2007 S M T W Th F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

2π

$f(x)=f(x+p)$

$1+ ((ab)*x/(1*c) + a(a+1)b(b+1)*x^2/(1*2*c(c+1))) + a(a+1)(a+2)b(b+1)(b+2)*x^3/(1*2*3*c(c+1)(c+2)....$

$y'' + 3y' + 2y = f(t)$

$f(x) = \cos x$

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